Performance Audit Telephone Billing Process

January 2003

City Auditor's Office

City of Kansas City, Missouri

January 8, 2003

Honorable Mayor and Members of the City Council:

This performance audit of the Information Technology Department's telephone billing process was initiated by the City Auditor pursuant to Article II, Section 13 of the city charter. The audit focuses on desk phone charges and billings.

Billings for desk phone services were not provided to user departments timely for fiscal year 2002. The department did not bill city departments for desk phone expenses until March 2002. Departments were not billed for long distance service until February 2002. For cellular and pager services, the departments were billed more timely. The delays in billing were due to continuing problems with an invoicing system purchased in 1999. We recommend that Information Technology provide the City Council with a plan on how to resolve outstanding problems with the invoicing system.

Delays in receiving timely information on telephone costs hinder departments' ability to control costs and increase the risk of city resources being used inappropriately. Lack of timely information has also strained the relationship between Information Technology and fiscal officers for other city departments. Some fiscal officers expressed dissatisfaction with Information Technology communicating information to them regarding the billing process and issues on current charges. We recommend developing service agreements with the user departments to clarify Information Technology's responsibilities and improve its relationship with user departments.

Items billed to user departments by Information Technology are consistent with items typically charged by departments that provide services to other departments on a cost reimbursement basis. The item names however, may not be descriptive enough for user departments to understand the service or equipment for which they are being charged. By providing clear descriptions of the items in the service agreements, Information Technology could improve its relationship with the user departments.

Information Technology bills for a reserve but does not have a telecommunication system replacement plan. There are no estimates for the cost of replacing the system. The amount charged to departments is based on past expenditures. Revenues from the telecommunication program and other sources are commingled in the same Information Technology working capital fund. Charging departments without knowing capital requirements and reserves accumulated could lead to misallocation of resources. We recommend establishing a separate telecommunication working capital fund to improve tracking of program resources. We also recommend the Director of Information Technology develop a replacement plan for the telecommunication system and expenditures associated with it.

The average price of desk phone service has increased from \$20.53 to \$24.73 a month since the system changed in 1999 but the telecommunication system has improved. Some of the increased costs were due to expenses that were not charged prior to the system change including Telecommunication Division administrative expenses and system replacement costs.

The draft report was sent to the City Manager and Director of Information Technology on October 22, 2002. A written response is appended. We appreciate the courtesy and cooperation extended to us by the staff of the Information Technology Department throughout the audit. The audit team for this project was Michael Eglinski, Julia Terenjuk, and Vivien Zhi.

Mark Funkhouser

City Auditor

Telephone Billing Process

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Introduction

Objectives

This audit of the Information Technology Department's telephone billing process was conducted pursuant to Article II, Section 13 of the Charter of Kansas City, Missouri, which establishes the Office of the City Auditor and outlines the City Auditor's primary duties.

A performance audit is an objective, systematic examination of evidence to independently assess the performance of a government organization, program, activity, or function in order to provide information to improve public accountability and facilitate decision-making.¹ This audit was designed to answer the following questions:

- Did city departments receive timely billings for telephone expenses from Information Technology?
- Are desk phone expenses charged by Information Technology reasonable and appropriate?
- Has consolidating telecommunication services for desk phones resulted in savings for the city and departments?

Scope and Methodology

Our review of the telephone billing process focused on desk phone charges and billings. We did not examine controls over telephone usage; such investigation was outside the scope of this audit.

The audit was conducted in accordance with generally accepted government auditing standards. Our audit methods included the following:

• Interviewing Information Technology Department staff and fiscal officers from other city departments.

¹ Comptroller General of the United States, Government Auditing Standards (Washington, DC: U.S. Government Printing Office, 1994), p. 14.

- Conducting a survey of fiscal officers to gather additional opinions on the telephone billing process.
- Reviewing accounting literature regarding internal service funds.
- Reviewing city financial records related to telephone billing.
- Reviewing the city's telecommunication contracts.

No information was omitted from this report because it was deemed privileged or confidential.

Background

Legislative Authority

Information Technology is responsible for managing the city's electronic and computer operations, including operation of the city's telephone system.² The department's Telecommunication Division provides maintenance, support, and billing services for the city's local, long distance, wireless, and pager services. The division supports over 4,500 phone lines at numerous city locations.³

Recent Changes

Prior to 1999, the city had telecommunication services from different vendors and numerous single line locations. There were 500 bills/accounts associated with the telecommunication system. In 1999, most of the city's telecommunication services and billing responsibility were centralized under Information Technology. The change was intended to gain efficiency and reduce costs; consolidate the billing process and operations; and standardize voice system capabilities, features, and equipment by utilizing one vendor.

Billing Activities

The department's Telecommunication Division receives monthly bills from vendors and feeds the information into the invoicing system. The division bills city departments for long distance, wireless, pager, and

² Code of Ordinances, Sec. 2-701.

³ The Information Technology Department does not support desk telephone systems for the Police or Aviation departments but does provide them with wireless and pager services.

desk phone related expenses. In turn, departments pay the division through an internal service fund. In fiscal year 2002, city departments paid the internal service fund over \$2.6 million for telecommunication services. (See Exhibit 1.)

Wireless \$675,490 25% Desk Phone \$1,840,479 Long Distance 70% \$73,286 3% Pager \$61,505 2%

Exhibit 1. Telecommunication Expenses, Fiscal Year 2002⁴

Source: AFN Table.

⁴ This includes expenses user departments paid Information Technology for telecommunication services. It does not include telecommunication expenses for the Aviation or Police departments.

Performance Audit: Telephone Billing Process

Findings and Recommendations

Summary

Information Technology did not provide individual departments with fiscal year 2002 billing data for desk phone charges until March 2002. The delays in providing data on desk phone service were due mainly to problems with an invoicing system purchased in 1999. Delays in receiving timely information on telephone costs hinder departments' ability to control costs and, if needed, to take corrective action quickly. The delays also strained relations between Information Technology and other city departments. We recommend the department develop a service agreement describing the services to be provided to user departments. We also recommend that the department provide the City Council with information regarding how outstanding problems with the invoicing system can be resolved.

Items billed to user departments by Information Technology are consistent with items typically charged by departments that provide services to other departments on a cost reimbursement basis. The item names, however, may not be descriptive enough for user departments to understand the service or equipment for which they are being charged. By providing clear descriptions of the items in the service agreements, Information Technology could also improve its relationship with the departments.

Information Technology bills for a reserve but does not have a plan for future system replacement. There are no estimates for the cost of replacing the telecommunication system. The amount charged is based on past expenditures. Revenues from the telecommunication program and other sources are commingled in the same working capital fund. We recommend establishing a separate telecommunication working capital fund to improve tracking of program resources. We also recommend the Director of Information Technology develop a plan for replacing the telecommunication system and expenditures associated with it.

The average price of basic desk phone service in City Hall has increased from \$20.53 to \$24.73 a month since the system changed in 1999, but the telecommunication system has improved. The new system provides

opportunities for upgrades and allows expensive lines to be converted to less expensive ones. In addition, some of the increased costs were due to expenses that were not charged prior to the system change, including Telecommunication Division administrative expenses and system replacement costs.

Telecommunication Expenses Billed by Information Technology Untimely

Information Technology did not bill city departments for their fiscal year 2002 desk phone expenses until April 2002. The delays in providing data on desk phone expenses were largely caused by problems with the invoicing system used by Information Technology to identify departments' telephone expenses. Delays in receiving timely information prevent departments from controlling costs or detecting misuse of city resources. In addition, the delayed billings strain the relationship between Information Technology and other departments.

All Department Desk Phone Charges Posted in April

No desk phone charges for fiscal year 2002 posted to user departments' accounts until April 2002, the last month of the fiscal year. Long distance charges did not start posting until February 2002. Cell phone and pager charges posted more timely. (See Exhibit 2.)

Exhibit 2. Monthly Expenses Posted by Type of Charge, Fiscal Year 2002

| | Month Charges Posted to Department Accounts | | | |
|-------------------------|---|---------------|------------|--------|
| Bill Month ⁵ | Desk Phone | Long Distance | Cell Phone | Pager |
| May-01 | Apr-02 | Feb-02 | Oct-01 | Oct-01 |
| Jun-01 | Apr-02 | Mar-02 | Aug-01 | Oct-01 |
| Jul-01 | Apr-02 | Mar-02 | Oct-01 | Oct-01 |
| Aug-01 | Apr-02 | Feb-02 | Oct-01 | Oct-01 |
| Sep-01 | Apr-02 | Feb-02 | Oct-01 | Oct-01 |
| Oct-01 | Apr-02 | Feb-02 | Nov-01 | Nov-01 |
| Nov-01 | Apr-02 | Feb-02 | Dec-01 | Dec-01 |
| Dec-01 | Apr-02 | Feb-02 | Feb-02 | Jan-02 |
| Jan-02 | Apr-02 | Feb-02 | Mar-02 | Mar-02 |
| Feb-02 | Apr-02 | Apr-02 | Apr-02 | Apr-02 |
| Mar-02 | Apr-02 | Apr-02 | Apr-02 | Apr-02 |
| Apr-02 | Apr-02 | Apr-02 | Apr-02 | Apr-02 |

Source: AFN Table.

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⁵ The bill month is the month the invoice and detail was received from the vendor, not the period for which the service was provided.

Although Information Technology received billings each month from the city's telecommunications providers, it did not provide individual departments with fiscal year 2002 billing information for desk phone charges until March 2002. The department did not begin providing information on long distance usage until February 2002. Although some cell phone and pager billings were not timely, Information Technology has been sending departments these bills more regularly since October 2001.

Invoicing System Problems Contributed to Untimely Information

The delays in providing information on desk phone expenses were largely caused by problems with the invoicing system used by Information Technology to identify departments' telephone expenses. The city contracted for the new system in 1999. Although implementation was to be completed by January 2000, the system is still not fully functional. Information Technology is still having problems generating desk phone expense reports for departments. They are devoting staff resources to fix the system. Information Technology staff could not estimate when the invoicing system will be fully implemented.

Information Technology should provide the City Council with a plan on how to resolve any outstanding problems with the invoicing system. The plan should state when problems will be resolved.

Delayed Information Limits Departments' Ability to Control Costs

Delays in receiving timely information on telephone costs hinder departments' ability to monitor costs, or evaluate the appropriateness of telephone or cell phone usage assignments, or plans.

The lack of timely information also impedes departments' ability to detect employee misuse of city resources quickly, particularly for long distance service or cell phones. Without timely information, an employee making improper phone calls could leave city employment before the cost has been recovered.

The lack of timely information has strained the relationship between Information Technology and fiscal officers for other city departments. We surveyed the fiscal officers on their perceptions of the telephone billing process. In our survey, some fiscal officers expressed dissatisfaction with Information Technology communicating information

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⁶ Information Technology has not paid for the invoicing system yet. According to the contract, Information Technology does not pay for the invoicing system until it has been operational for two weeks.

to them especially regarding the billing process and issues on current charges in our survey.

Service and Terms Should Be Described in Service Agreement

The relationship between Information Technology and other city departments could be improved through the implementation of a telecommunication service agreement. The agreement would clarify Information Technology's responsibilities by defining service objectives such as billing frequency and timeliness, and should be signed by both Information Technology and the user departments. By monitoring its performance against stated service levels, Information Technology can identify problems in meeting service objectives.

Items Charged for Desk Phone Services Are Appropriate

The items included in Information Technology's bills to other city departments are consistent with the types of items typically charged by departments that provide services to other departments on a cost reimbursement basis. Some fiscal officers, however, expressed frustration at Information Technology's inability to explain certain charges relating to desk phones. Information Technology could improve its relationship with the user departments by providing the departments with clear descriptions of the items for which they are being charged.

Desk Phone Charges Are Appropriate

The desk phone-related items for which Information Technology bills user departments are consistent with those generally charged by departments providing services to other departments through an internal service fund. The descriptions of the charges listed on the bills, however, could be clearer.

Payments by city departments for telephone expenses go through an internal service fund, called the information technology working capital fund. Internal service funds are used for activities that provide goods or services on a cost-reimbursement basis. Reimbursable operating expenses typically include personal services, contractual services, materials and supplies, and depreciation. The charges consist of costs for personnel who administer and maintain the telecommunication system, and the cost of the system components, equipment, and surplus parts. (See Exhibit 3.)

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⁷ Gauthier, Stephen J., *Government Accounting, Auditing, and Financial Reporting*, (Chicago: Government Finance Officers Association, 2001), p. 22.

Exhibit 3. Types of Expenses Charged by Information Technology to Other Departments

| Expense Category | Items Charged ⁸ | | |
|------------------------|---|--|--|
| Personal services | Personnel costs of the Telecommunication Division (6 FTEs) | | |
| Contractual services | Lease cost of the telephone switching units Maintenance cost of PBX switching units Cost of the data connectivity for sites outside City Hall Cost of providing a dial tone Lease cost of a telephone unit and port Cost of invoicing system and voicemail Cost of 888 network dial up Labor and materials cost for telephone requests made through the Help Desk | | |
| Materials and supplies | The costs for parts and network maintenance equipment The cost for surplus and unassigned parts such as phones and line cards | | |

Source: Information Technology Department.

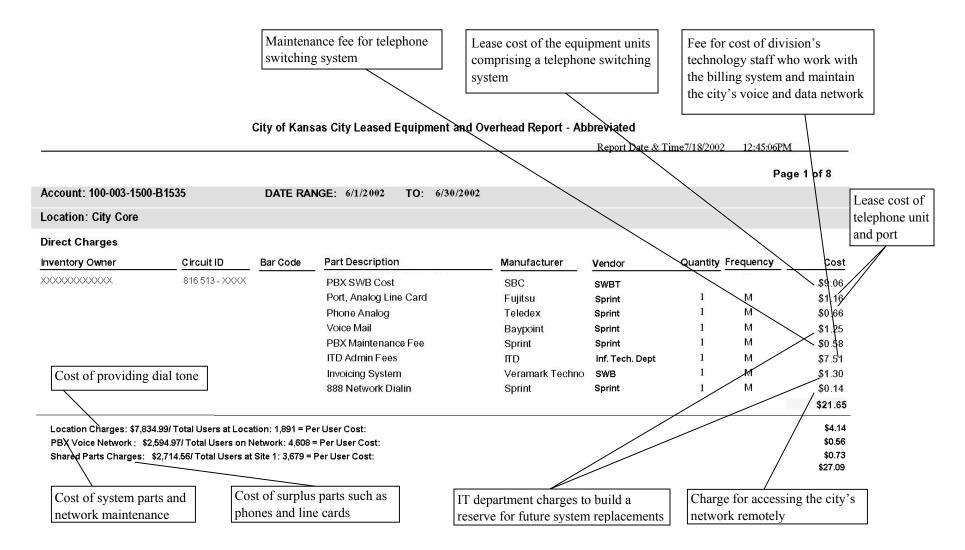
Description of Items Charged on Bills Sent to User Departments Could Be Clearer

Although the desk phone bills Information Technology sends to departments break down the charges, not all of the descriptions are clear. Exhibit 4 shows a typical desk phone bill received by a city department, with an explanation of charges associated with basic desk phone service at City Hall. The bill includes descriptions such as "Port, Analog Line Card" and "Invoicing System." These item names are not clear to everyone who receives a bill. Respondents to our survey expressed some dissatisfaction at Information Technology's inability to explain certain charges relating to desk phones. By providing user departments with clear descriptions of the items for which they are being charged, Information Technology could improve its relationship with the user departments. The department could include a list of definitions in the service agreement it develops with other city departments.

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⁸ The expenses shown are the basic charges included in desk phone service and are listed on departments' bills. Actual charges are based on the type of the telephone, its location, and the number of active telephone lines in the system. As a result, the amount charged to each line could vary from month to month.

Exhibit 4: Explanation of Charges Associated with Basic Desk Phone Service at City Hall, June 2002



Information Technology Does Not Have a Plan for System Replacement

Information Technology has not developed a plan to replace the telecommunication system, but bills for a reserve by charging user departments. The amount charged is based on past expenditures and there are no estimates for the cost of replacing the system. Information Technology does not track the level of the reserves the program has accumulated. Charging departments without knowing capital requirements and reserves accumulated could lead to misallocation of resources. Developing a plan for replacing the telecommunication system and segregating program reserves would ensure that funds for timely replacement of the system exist and are accounted for.

Information Technology Charges for System Replacement Without a Plan

Information Technology does not have a plan for replacing the telecommunication system, but bills other departments to accumulate a reserve for such a replacement. Although charging for replacement costs is appropriate practice within an internal service fund, the department does not have a plan for how the replacement would take place. In addition, Information Technology has never estimated what the capital requirement for such replacement would be.

Information Technology builds a reserve by billing user departments for past expenditures; however, such expenditures were paid off or encumbered in previous years. The charge appears on the bills as "voice mail" and "invoicing system" charge. Accumulating reserves based on costs which occurred in the past provides no assurance that the collected funds will be sufficient to cover future replacement costs.

Developing a replacement plan would identify timing and capital requirements for replacements needed. The plan would also help identify reserves needed to cover those costs and a structure of corresponding charges. Proper planning would limit excess funds or a deficit accumulating in the program.

We recommend the Director of Information Technology develop a replacement plan for the telecommunication system. The plan should be developed in accordance with service objectives outlined in the service agreement and take into consideration possible budget constraints imposed on user departments. The desired level of the

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⁹ Government Accounting, Auditing, and Financial Reporting, 2001, p. 23.

telecommunication system functionality in the long term should also be considered.

Reserve Funds Are Commingled with Revenue from Other Sources

Information Technology keeps accumulated telecommunication reserves in the internal service fund. The fund includes three other programs: PC Life Cycle, Enterprise Licensing, and Radio Maintenance. Management does not track what portion of the fund balance belongs to each program. As a result, monitoring the accumulated telephone program reserves is difficult. If not properly monitored, misallocation of resources could jeopardize a timely system replacement. Segregating telecommunication reserves from other programs would improve tracking of program resources.

We recommend the City Manager prepare a resolution for Mayor and City Council consideration to establish a separate telecommunication working capital fund to improve tracking of program resources.

Price Departments Pay for Desk Phone Service Has Increased

The average price of a basic desk phone service in City Hall has increased from \$20.53 to \$24.73 a month since the system changed in October 1999. The new system increased the city's telecommunications capacity, and provided opportunity for upgrades and enabled expensive lines to be converted to those that were less expensive. Some of the increased cost was due to expenses being charged that had not been charged prior to the system change, such as PBX leasing costs, Telecommunication Division administrative expenses, and system replacement costs.

Departments Should Review Records Management Practices

In order to compare long distance rates between 1999 and 2002, we requested the long distance contract the city had with AT&T between 1996 and 1999. However, neither Information Technology nor the Purchasing Division could provide a copy of the contract.

City code requires copies of all contracts to be filed with the Finance Department and with the office of the department affected by the contract. ¹⁰ State law requires municipal contracts and agreement files to

¹⁰ Code of Ordinances, Sec. 2-1645.

be retained for a minimum of five years. Contracts should be stored to meet the city and state record retention requirements and be accessible. It is difficult to evaluate the cost of long distance without reviewing the actual contract.

The City Manager should direct departments to review their records management procedures.

Recommendations

- 1. The Director of Information Technology should develop a plan for resolving issues with the invoicing system, including an estimate for when the system will be fully operational, and provide the plan to the City Council.
- 2. The Director of Information Technology should develop a telecommunication service agreement with user departments that specifies objectives such as billing frequency, timeliness, customer service to be provided, and definitions of billing terms.
- 3. The Director of Information Technology should develop a cost estimate and plan for replacing the telecommunication system.
- 4. The City Manager should prepare a resolution for Council consideration that establishes a telecommunication working capital fund.
- 5. The City Manager should direct departments to review their records management procedures.

Performance Audit: Telephone Billing Process

Appendix A

Director of Information Technology's Response

Performance Audit: Telephone Billing Process



Inter-Departmental Communication

DATE:

December 31, 2002

TO:

Mark Funkhouser, City Auditor

FROM:

Gail Roper, Director Information Technology Department

SUBJECT:

Response to the Draft Audit on Telephone Billing Process

There were a few items that require a response. These items are listed below with references to the sections where these items are discussed. Since the same items appear to be mentioned in several places there are multiple references for each item.

<u>Item - Provide the City Council with a plan on how to resolve outstanding problems with the invoicing system.</u>

References:

- Letter to Mayor and Members of the City Council paragraph 2
- Findings and Recommendations Summary paragraph 3
- Telecommunication Expenses Billed by Information Technology Untimely
- Recommendation # 1

Response:

The Information Technology Department agrees with this recommendation.

The Information Technology Department is working with the software vendor to complete the final report. The IT Department expects completion by March 1, 2003. This will complete the current contract with the vendor.

At that time, the IT Department will work with the departmental financial officers to begin enhancements of the existing system. This process will involve the identification and prioritization of departmental needs as well as training on the current system.

It should be noted that:

- Since March of 2002, the Information Technology Department has been providing departments with invoices in a timely manner, based upon receipt of bills and detail from service providers.
- The project is over 95% complete at this time.
- Based on November 2002 charges, the average monthly cost of a desk phone in City Hall is \$27.37. The estimated average monthly cost of a SBC business phone is about \$44.61. Since there are about 1,900 phones located in City Hall, Oak Towers, Municipal Court and KCCC, the associated annual savings is about \$390,000.

<u>Item - Develop Service Level Agreements with other Departments</u>

Reference:

- Letter to Mayor and Members of the City Council paragraph 3
- Findings and Recommendations Summary paragraph 1
- Recommendation # 2.

Response:

The Information Technology Department agrees with this recommendation.

The Information Technology Department started developing Service Level Agreements earlier this fiscal year, prior to this audit. At this time, a Service Level Agreement exists with the Health Department. ITD is currently working with the Water Department and Aviation Department on Service Level Agreements. Staffing limitations will delay this process.

Item - Providing clear descriptions of items billed

Reference:

- Letter to Mayor and Members of the City Council paragraph 4
- Findings and Recommendations Summary paragraph 2
- The Description of the Items Charged on Bills Sent to User Departments Could be Clearer.

Response:

The Information Technology Department agrees with this recommendation.

The Information Technology Department is currently reviewing the report layouts for ways to improve understanding. ITD will also be offering a training session in FY 03/04 to explain the telecommunications reports and solicit ideas for improvement.

Item - Develop a plan for the telecommunication system replacement

Reference:

- Letter to Mayor and Members of the City Council paragraph 5
- Information Technology Does Not Have a Plan for System Replacement.
- Recommendation # 3.

Response:

The Information Technology Department agrees with recommendation 3 to develop a replacement plan.

The Information Technology Department concurs with the need for a replacement plan and the associated reserve funds. ITD has already started looking at possible options for the Voice Telecommunications System Replacement. ITD will begin a formal planning effort to establish a direction before the budget cycle begins in August 2003. At that time, ITD intends to have a plan with an associated timeline and cost analysis, which can be used for budgeting purposes.

Item - Establish a separate telecommunications working capitol fund

Reference:

- Letter to Mayor and Members of the City Council paragraph 5
- Information Technology Does Not Have a Plan for System Replacement.
- Recommendation # 4.

Response:

The Information Technology Department agrees with recommendation 4 to establish a separate working capital fund for telecommunications.

The proposal to create a separate reserve revenue telecommunication fund is fully supported as a means to eliminate the potential commingling of funds. In the past, ITD has tracked the revenues and expenses for telecommunications using spreadsheets to document fund balance. Creation of a separate fund would simplify revenue and expense tracking in AFN, and make telecommunications billing more explicit and clearly delineated.

<u>Item - Departments Should Review Records Management Practices.</u>

References:

- Departments Should Review Records Management Practices.
- Recommendation # 5

Response

The Information Technology Department agrees with recommendation 5.

The contract in question was between PTI and AT&T. The IT Department in conjunction with the Purchasing Division of the Finance Department used this contract to supply the City with Long Distance on a competitive basis until the City could bid the services locally. Both PTI and AT&T were contacted for copies of this contract. To our dismay, we found that copies were not available. ITD will comply with retaining copies of cooperative agreements in the future. All current contracts are properly stored within the department.